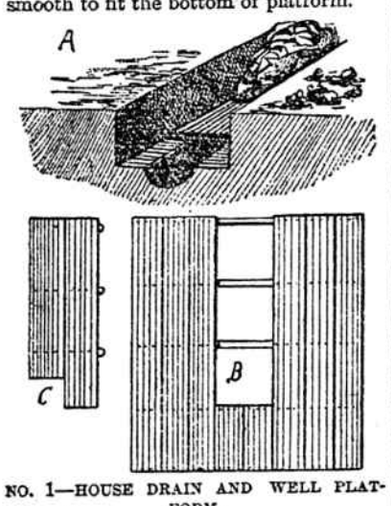
FARM AND GARDEN.

INTERESTING INFORMATION RELATING TO THE FARM.

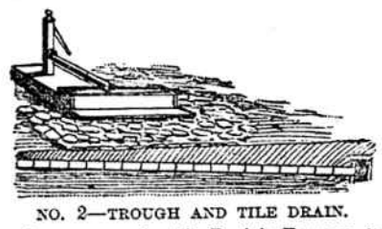
House Drains and Well Platform — Ways and Means Devised for Avoiding Mud Holes and Stagnant Puddles—An Effective Plan.

With a platform similar to that shown at B, in cut 1, the troubles of cleaning the well or pump are much lessened. The covering or door, which is shown by itself at C, can be easily removed, and does away with tearing up nailed down boards. It fits closely around the pump, holding it firm when pumping by hand or wind power. Thick cleats fit tightly against the sleepers of the platform, keeping it firmly in place. To avoid the entrance of rats, worms and reptiles, the upper brick or stone, for a few feet down, should be placed in mortar or cement. The top should incline a little and be smooth to fit the bottom of platform.



NO. 1—HOUSE DRAIN AND WELL PLATFORM.

Mud holes exist on many farms at the watering troughs. Some permit hogs to wallow there, and the filth of these stagnant puddles must contaminate the water, making it unfit for man or beast. As it is almost impossible to keep troughs from leaking some means should be used to avoid mud holes.



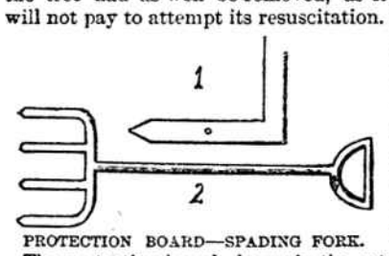
NO. 2—TROUGH AND TILE DRAIN.

A correspondent in Prairie Farmer, to which journal we are indebted for the illustrations here presented, devised the plan shown in cut 2. A tile drain was laid under the trough near the surface. It carries the water into a silt basin, shown at the right, which removes any muddiness, and from thence it runs into a regular drain. Stone was laid around the trough at a cost of about $1, and the arrangement has done service for eight years.

At A, in cut 1, is shown also a plan by which surplus water was conducted away from a house well. An underground drain was made by first digging a trench a foot deep, with flat bottom ten inches wide, in the middle of which a narrower trench was made. A board was laid in the bottom and the dirt placed upon it. Without the bother or expense of laying a tile drain, the small amount of water wasted at the house well was thus effectually removed a few rods down the hill.

Sun Scalded Trees.

Apple trees in many sections of the country are more injured by sun scald than by any other one cause. Hence the advisability of protecting trees, especially young ones with high heads, from the sun's rays. Trees that incline to lean to the northeast are very susceptible to the rays of the afternoon sun which will strike their stems with fatal effect, and the exposed bark will soon dry and peal off, the worms will commence work, and the tree had as well be removed, as it will not pay to attempt its resuscitation.



PROTECTION BOARD—SPADING FORK.

The protection board shown in the cut is advised by Mr. James Fitz, of Keswick, Va., in his manual on apples, as being efficient and inexpensive. To make a similar one, take two boards (old plank will answer), saw them off two and a half or three feet long by six or eight inches in width. Nail their ends together at right angles; bore an auger hole in the center of the one that is to lie on the ground; place it on the southeast side of the tree and pin it to the ground. The perpendicular arm or part is the shield, and the tree is safe. A turf or flat rock will serve to hold it in place instead of a pin.

If the trees are only slightly injured, they can sometimes be saved by an application of equal parts of clay and cow dung well mixed and carefully spread on the dried parts and tied securely by a bandage of cloth. The wounded parts should be first scraped, and all dead bark removed so as not to injure the live wood or bark. This composition may be used in grafting and wounds generally.

The remaining figure in the cut is a steel spading fork, which will be found useful for working immediately under the tree. It can be used with less injury to the roots than a hoe or other implement, and to greater depth and with less labor.

There was an attendance of nearly 300 members at the recent annual convention of American nurserymen. Officers re-elected were: President, George A. Sweet, Dansville, N. Y.; vice president, G. J. Carpenter, Fairbury, Neb.; secretary, Charles A. Green, Rochester, N. Y.; treasurer, A. R. Whitney, Franklin Grove, Ills.

FACTS ABOUT WOOL.

Differences Between Unwashed, Fleece Washed, Tub Washed and Scoured Wool.

It is known to all shepherds and dealers in wool, and especially to manufacturers of woolen goods, that a large percentage of the weight of wool as shorn from the sheep is foreign matter, from which the wool has to be cleansed before it is manufactured. In buying wool this element of waste is a very important one to be considered. It differs widely in different breeds, and is also affected more or less by the condition in which the sheep have been kept in clean pastures or otherwise while the wool was growing. It is no easy matter to determine by estimation the several proportions of wool and waste.

As stated by dealers and manufacturers, limewashed merino wool shrinks from 50 to 80 per cent. in scouring. The lightest and choicest Australian medium unwashed will yield 50 per cent. less of scoured wool, and the very heaviest buck fleeces will yield about 20 per cent. of pure scoured wool. Most of the unwashed wools yield about 50 per cent of scoured wool. Some of the light, open, coarse unwashed wools of the carpet class will yield as high as 70 per cent. of scoured wool. Fine Ohio full blood merino unwashed wool (buck fleeces thrown out) yield from 35 to 40 per cent. of scoured wool. The merino fleeces grown in Texas and on the western prairies yield from 20 to 35 per cent. of scoured wool. Unmerchantable Ohio fleeces yield from 35 to 40 per cent. when scoured. Cross bred Ohio fleeces washed on the sheep yield from 60 to 75 per cent. of scoured wool and cross bred western prairie fleeces from 30 to 50 per cent. Tub washed wools generally yield from 80 to 90 per cent. of scoured wool. Scoured wools, in the condition in which they are usually prepared for sale, yield from 85 to 90 per cent. of scoured wool on rewashing.

Wool is marketed as unwashed, fleece washed, tub washed and scoured. Unwashed wool is the fleece in the condition in which it was shorn from the sheep. Fleece washed is wool that has been washed on the sheep, usually in streams of running water, before they are shorn. Such washing, if thoroughly done, will remove the alkaline portion of the yolk and most of the earthy matter, but leaves the animal oil in the fleece. As sometimes practiced, it leaves the wool but little if any better than good unwashed. Tub washed is wool washed by hand in tubs, as it is usually done in a small way by farmers. If the washing is done in cold water it is often no better than fleece washed. When washed with warm water and soap it may be made almost equal to scoured wool. Scoured wool is wool washed in a warm alkaline bath and afterward rinsed thoroughly in clear water until it is absolutely clear and ready for manufacturing.

From the above it will readily be seen that no rule of "one-third off for unwashed," or, indeed, any other percentage can have any general application in the buying and selling of the clips without in most cases being unfair to the buyer or seller. The consequence is, says The New York World, from which the above is quoted, that wool is now very generally being bought on its merits, the price varying according to its cleanness and condition. Washing wool on the sheep has also become far less common than formerly.

Salting Butter.

Butter, as a rule, is salted to the taste, without weighing, but about an ounce of pure salt to a pound of butter is the amount required. The churning should not be continued too long. When the butter is in the granular state draw off the buttermilk and wash with cold water until it runs clear, then carefully stir in the salt and press out the water without breaking the grain of the butter.

The brine salting process consists in drawing off the buttermilk as soon as the butter gets into the granular state and washing out the buttermilk that still remains with very cold water slightly salted; then very strong, clear brine is poured on it, in which it is soaked and stirred awhile until sufficiently salt to suit the taste; then the butter is taken out and gently pressed enough to cause the surplus water to run off. While it is important to remove the buttermilk as thoroughly as possible it is equally so to do it so as not to mash the grain of the butter or squeeze it into a pasty mass while working it. A good deal of judgment and experience are requisite for determining when butter has been worked just enough, for it should not be worked until it is entirely dry. No matter whether dry salted or brine salted, a piece of good butter when cut though with a knife should show two moist, clean cut surfaces and without any sticky butter adhering to the knife.

Value of Barn Yard Manure.

No exact figures can be given to express the actual value of what is called farm yard manure. The three valuable constituents—nitrogen, potash and phosphoric acid—vary widely in different analyses, owing to the kind and condition of the animals producing it, their food and the proportion and kind of litter with which it may be mixed up. Again, there is the difference between fresh, partly rotted and thoroughly rotted manure, and its value is further increased or diminished by the manner in which it has been preserved. The following amounts are variously given by different authorities as contained in a ton of ordinary farm yard manure: Nitrogen, from nine to thirteen pounds; potash, from ten to twelve, and phosphoric acid, from six to nine pounds. A very important consideration in the use of mixed manures of this description is their influence on the texture and general character of the soil to which they are applied. While undergoing decomposition they may also aid in changing some of the mineral constituents of the soil into soluble forms.

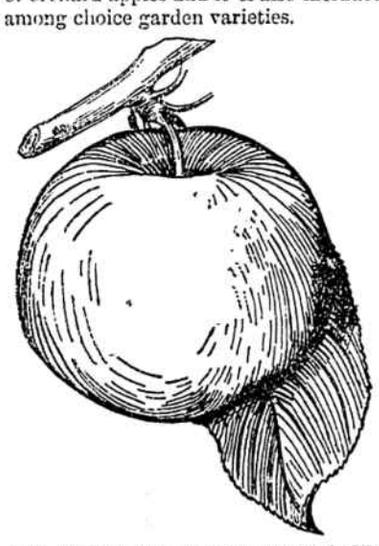
The condition of rye averages high in the northwest. It is lowest in Kansas, and considerably reduced in South Carolina.

FARM AND GARDEN.

OBSERVATIONS AND EXPERIENCES OF WIDESPREAD INTEREST.

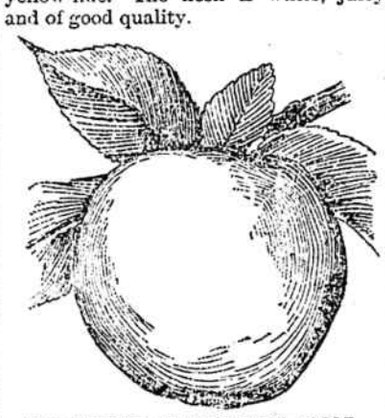
Two Profitable and Early Varieties of Apples — The Red Astrachan and the Yellow Transparent, Illustrated and Described.

Probably the most profitable early summer apple in every part of our country from Maine to California is the Red Astrachan. It is of Russian origin and of large, roundish form, nearly covered with deep crimson. The flesh is tender, juicy and rich acid. The tree is a vigorous, strong grower of upright spreading habit and a good bearer. The Red Astrachan is one of the most profitable of orchard apples and it is also included among choice garden varieties.



RED ASTRACHAN—A MIDSUMMER APPLE.

In the second cut is shown the form of the fruit and leaf of the Yellow Transparent apple tree. This, too, is of Russian origin, and like other Russian varieties is hardy. The fruit is medium in size and of light transparent lemon yellow hue. The flesh is white, juicy and of good quality.



THE YELLOW TRANSPARENT APPLE.

For an early apple it is a good shipper. The tree is of upright growth, very prolific and a remarkably early bearer. J. T. Lovett claims that it sometimes produces in the nursery row the second year from the bud. It ripens its fruit some days in advance of Early Harvest.

Pyrethrum, or Buhach.

Every farmer by this time ought to know the merits of pyrethrum as an insecticide, for these have been set forth from time to time ever since its efficiency was proven. That none may become confused about the matter of names, it is again stated that there are three principal brands of this powder upon the market, known as "Persian insect powder," "Dalmatian insect powder" and "Buhach," which last is the California product. These are all made from the powdered flowers of a plant of the genus pyrethrum. The buhach is the brand most freely used by gardeners and farmers, being cheaper somewhat than the

PYRETHRUM ROSEUM.

other brands, and, according to some authorities, more effective. Pyrethrum of whatever brand must be kept in air tight vessels, for on exposure to the air it soon loses its value.

The cheapest way to apply pyrethrum, and an effective one, is in the liquid form with spray bellows or force pumps. One ounce of the powder to three gallons of water is an approved formula.

The fact, announced for the first time by Mr. E. S. Carman, some three years ago, that pyrethrum is sure death to rose beetles, is beginning to be appreciated throughout the country. No more tedious hand picking of these dreaded pests is necessary. "One heaping tablespoonful of pyrethrum in two gallons of water, sprayed over the infested plants, will rid them of every rose bug in half an hour," asserts Mr. Carman, who adds that the remedy must be repeated daily for several times. As has been before told, pyrethrum or buhach is a specific against the common cabbage caterpillars, slugs on pear or cherry trees, vermin on fowls, flies, mosquitoes, etc.

The foregoing cut shows several sprays of pyrethrum roseum photographed from nature. This plant thrives and bears flowers in many sections of the country, and there appears no reason why farmers should not grow it if they so desire.

Here and There.

The advance in value of wheat has prevented reduction of area threatened by previous discouragement.

There is the usual breadth of barley, but no sign of such increase as would reduce the volume of importation.

Excessive rains and floods perceptibly reduced the condition and production of wheat in various localities in Pennsylvania, Maryland and Virginia.

POINTS FOR THE DAIRY.

Opinions Expressed at a Meeting of New York Dairymen.

At a meeting of dairymen in Jefferson county, N. Y., E. S. Munson, of Delaware county, expressed the opinion that cold water setting of milk is the best. Cream should be kept cold until ready for churning, then warmed all together, churned at a temperature of 62 degs. He thought one ounce of salt to one pound of butter was about the right proportion, although he allowed that the amount of salt used in butter was strictly a matter of taste. The butter churned weighed 10½ pounds, making 19 pounds of milk necessary to produce one pound of butter. Cream stored in cans or pails should be mixed or stirred thoroughly at least six times every twenty-four hours.

A member from Richmond, N. Y., with several years' experience in silos and ensilage is an enthusiast on the subject. His dairy of fifty cows yields one pound of butter for every fourteen pounds of milk, and all the butter he produced last winter sold at an average of forty-one cents per pound. So much for ensilage.

A dairyman from Utica spoke in favor of a judicious system of feeding ensilage. He said the best corn for ensilage is the corn that will ripen best. He filled his silos with uncut sweet corn, and preferred that to any other. During last January and February it cost him eleven cents a head per day to feed his cows on ensilage.

In answer to an inquiry Professor Cooke said that white caps or white specks in butter were caused by the cream drying on the edge of the cream jar or pail, also by over sourness of the cream.

Pasturage for Colts and Cattle.

It is important that pasturage be properly chosen, especially for growing colts. If this is on very rich land, or watery, the grass will be too rank for the growth of fine, strong bones and firm, enduring muscle. Colts grown up on such will be pretty sure to be wanting in spirit, be slow of movement and deficient in wind; so much so that when in harness, if put up to a moderately fast pace—which can only be done by a repeated application of the whip—they breathe painfully, sweat intolerably and soon tire. The best pasture ground for colts is such as is well drained or naturally rather dry, and if it abounds with scattered rocks a foot or more in diameter, these are not objectionable, but small stones are, for the colts in running about are liable to strike on them to the injury of their hoofs, while they avoid the larger ones and rocks in their exercise.

The grass on such lands is sweet and tender, highly relished by the colts and very nutritious. Growing up on such, especially if limited to it, the feet and legs and the bones of the whole body become extra strong, more like ivory than common bone grown on quite succulent pasture. For cattle the pasture need not be so select in quality, for they will do well on wet meadows when the water is generally a little below the surface of the soil, only occasionally overflowing for a few hours and then drying off well.

A Long Lived Fence.

An Ohio correspondent writing in the World says: "More than fifty years ago my father made a board fence, inclosing the house, lot and garden, that remained in its place until last year, with scarcely any repairs or care other than that it was painted as a protection from decay. The secret of the longevity of the posts consists in the fact that the ends of the posts rested on flat stones with an iron pin fastened in the stone with lead and projecting up into a hole bored in the foot of the posts. These were further steadied and supported by a small iron rod entering the side of each post about one foot above the stone and bent so that the other end of the rod was fastened into the stone with lead as a brace and support. Last year the same posts, which still remained sound, were used again as posts for a new fence of wire and wood.

Agricultural Notes.

Don't throw soft feed on the ground, where half of it will be wasted, and then complain because "it cost so much for feed for those hens."

The proper feeding of calves is a question that should be carefully studied. Judging from results, very few do so. Cold milk should never be fed. To make up for the butter taken out of the milk in the shape of cream, some supplementary feed should be given with the skim milk. Linseed, oil cake, cotton seed meal, bran, oats and peas are all good.

Experiments have proved that sunflower seeds are irresistible bait for rats. Put the seeds in traps and try this method in your poultry house if you are troubled with the rodents.

Provide a place of shelter for fowls where they can be kept dry during hard rain storms.

Parsnips are very nutritious, and in the islands of Jersey and Guernsey are considered excellent roots for dairy cows and are extensively grown for that purpose.

Shut the young turkeys in at night and do not let them out on wet mornings till the grass has dried off. Give them water in shallow vessels. "Don't let the little turkeys get their backs wet till they are feathered" is a good rule.

The Wyandotte fowls are highly prized as winter layers.

Chickens, especially of the larger breeds, should never be allowed to perch until they are fully six months old, or the breastbone will be liable to become crooked. There is no cure for it, and it is a disqualification everywhere.

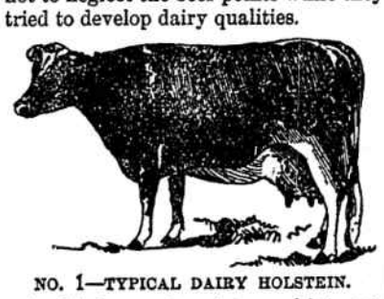
Dame Nature plants her plums in thickets. The "plum thicket" is a familiar childhood phrase. Therefore an Illinois horticulturist argues that plum trees should never be planted singly, but will do best in clumps, including different varieties that will aid each other in fertilization.

FARM AND GARDEN.

OF INTEREST TO FARMERS, STOCK GROWERS AND GARDENERS.

The Coming Holstein-Friesian—Dairy vs. General Purpose Cow—What Well Known Breeders Are Working For—Opinions Expressed by Several Authorities.

At the last meeting of the Holstein-Friesian Breeders' association somewhat divided advice was given. Professor Johnson of the Michigan Agricultural college urged breeders to pay particular attention to the dairy points of their cattle. In spite of the fact that the test he had shortly before completed gave the strongest evidence of the value of a Holstein steer for beef, he was emphatic in saying that the Holstein cow was specially designed by nature to serve as a dairy machine, and that every energy of the breeder should be devoted to the task of improving the ability to make milk and butter. Professor Morrow, on the other hand, seemed to think that the Holstein-Friesian might profitably apply for the position of "general purpose" cow, and he therefore urged breeders not to neglect the beef points while they tried to develop dairy qualities.



NO. 1—TYPICAL DAIRY HOLSTEIN.

As this is a matter of general interest, a request was made by the editor of Rural New Yorker that the breeders in various sections of the country should give their opinions on the subject. These opinions as expressed in The Rural New Yorker were agreed on one point, namely, that the Holstein-Friesian is emphatically a dairy cow, although her beef attributes are non-sufficient to make her a good all purpose cow.

NO. 2—TYPICAL "GENERAL PURPOSE" HOLSTEIN.

Messrs. Smith, Powers & Lamb, owners of Lady Fay, whose picture is given in the first cut, and who is accepted as about the highest type of the dairy Holstein, said: "The dairy qualities (those concerned in the production of milk and butter) are of paramount importance, and should never be sacrificed in order to secure better beef points; but at the same time we do not believe it is necessary to breed entirely away from beef qualities in order to retain or even to improve the essential dairy qualities. We believe in breeding for butter and milk first, last and all the time, and with these qualities developed in the highest degree, we wish to retain all the beef points possible."

A Colorado breeder writes: "The majority of people in this state want the Holstein-Friesian to be an all purpose cow. We aim to breed and raise good, large, well developed stock, but in so doing we do not neglect the milking qualities, as we breed to the finest and best milk and butter animals we can get. We believe that if breeding for beef qualities were entirely given up, and no attention were given to breeding for large, well formed bodies, the Holstein-Friesians would become in a number of years small, ill formed animals such as the Jerseys."

F. C. Stephens, owner of Rhoda, the general purpose cow, shown in the second cut, says: My advice is to breed so as to perpetuate the breed as they now are (taking as a standard the highest and best type); for we have in them a combination of qualities found in no other breed, and this and this only is what makes them better than any other known breed. It is their size that makes them so much more desirable than Ayrshires or Jerseys, and their milking qualities that recommend them to all farmers over the Shorthorn. The successful breeder of Holstein-Friesians is he who produces a cow weighing from 1,400 to 1,600 pounds, which will give ten times her weight in milk each year.

A Massachusetts breeder thinks that this question, like all others, has two sides and while in the west it does, without doubt, pay to raise beef, he doubts very much if it can be profitably done in New England. Therefore he believes it wise for New England men to give their attention to breeding first for milk and butter, and incidentally to producing an animal that will ultimately bring a fair figure at the block.

Rhoda, shown in the second cut, is a typical milk and beef animal. She has always been a great milker, having a year's record of 21,309 pounds, and a butter record of twenty-three pounds in seven days. She is now nearly 14 years old and has ceased to breed. The greatest weight she has ever attained was 2,030 pounds.

Best Preventive of Potato Rot.

The following formula, according to The New York State Botanist, is the best known preventive of potato rot: Dissolve four pounds of sulphate of copper in sixteen gallons of water; in another vessel slake four pounds of lime in six gallons of water. When the latter solution is cool pour it into the copper solution, stir thoroughly, apply to the potato plants when in bloom, or in this latitude about the middle of July, spraying the tops of it by means of a spraying apparatus, so as to moisten them thoroughly, but not drench them. If the weather should be rainy and thus favorable to the fungus, repeat the application in ten or twelve days.

TREES OF AMERICA AND EUROPE.

Instructive Facts About the Forest Growth of the United States.

That the United States consisted largely of unbroken forests is well known to all intelligent persons, and although sections have been greatly denuded none of the original species have become extinct. Few persons, however, are fully aware of the remarkable number of the species as compared with other parts of the world. In a report on Michigan state forestry, Dr. W. J. Beal, an officer of the commission, makes some interesting statements, not only in regard to the forests of that state, but of the trees and shrubs of North America and Europe as well.

The relative importance of the trees and shrubs of this country as compared with those of Europe is surprising. Great Britain has one species of basswood, one maple, not over twenty feet high; one cherry, from ten to twenty feet high; one small ash, two elms, two poplars, one beech, large but not high; one small white birch, one species of pine, inferior to our white pine, and a species of oak which sometimes grows to a great size. About ten species of trees are natives of her soil. Michigan, with half the territory, has seventy species. Great Britain has no white wood, no white or red cedar, no hickory.

Michigan has six species of maple of tree size, a basswood, a white wood, honey locust, Kentucky coffee tree, two cherry, a pepperidge, five species of ash, a sassafras, three elm, a hackberry, a mulberry, a buttonwood, black walnut, butternut, six hickory, about twelve oak, a chestnut, a beach, four tree birch, four willow of tree size, six poplar, three pine, four spruce, one larch, one arbor vitæ and a red cedar.

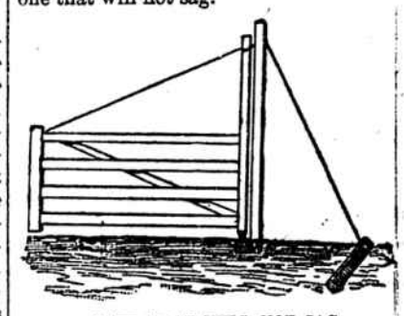
In the Atlantic region of North America there are 292 species; in the Pacific region 153 species. In all Europe there are only 85 species of trees.

Naturally the question arises, What has caused this great disparity? Scientists explain it to their own satisfaction by attributing it to glacial action. Away back in their tertiary period the trees of the regions now possessing an Arctic climate were such as now thrive in a warm, temperate zone like that of Georgia and California. Then came the glacial epoch, when snow and ice for most or all of the year extended to the Ohio river. At the approach of cold the trees slowly retreated southward as generation followed generation. As the climate again gradually grew warmer the trees and other plants slowly migrated northward.

In a similar manner during the glacial epoch the plants of Europe were driven southward. Europe, says Dr. Gray in The American Journal of Science, is all within the limits generally assigned to severe glacial action. Most of the plants of the warm temperate region had perished, and therefore were unable to retreat when the continent became warmer. "So our lines have been cast in pleasant places, and the goodly heritage of forest trees is one of the consequences."

A Good Farm Gate.

The gate shown in the accompanying illustration is, according to Ohio Farmer, one that will not sag.



A GATE THAT WILL NOT SAG.

This gate is made in the ordinary way, except that the post extends up three feet to a large staple, used for the upper hinge. The lower part of this post is an iron rod resting in a socket. A heavy galvanized wire runs from the top of the front post of the gate to the top of the rear post as a brace, and a one-fourth inch rod runs from the top of the gate post back into the ground at A, where it is attached to a broad block. This block is securely fastened in the ground with stones and tamped clay, so that it will not yield any. A heavy, flat stone would be better, sunk below the reach of plow and frost. Properly put up, such a gate will never sag, says the authority quoted.

What Others Say.

Peter Henderson thinks every farmer should have a few acres of root crops on his farm and he will find them invaluable for feeding stock during the winter.

Not half enough is attempted in the way of ornamental gardening with fruit, says a Country Gentleman correspondent. With the strictest utilitarian management few things in the country landscape are prettier than the blossoming or fruiting orchards, and a little taste and skill in arrangement will make the fruits a decided adjunct of the pleasure grounds.

To exterminate raspberry bushes in pastures American Cultivator advises to cut with bush scythe and then stock the pasture with cattle to browse the sprouts. It affirms, also, that neat cattle are much better than sheep for exterminating bushes, and that coarse wooled varieties of the latter will do more towards that object than those of finer grade.

Persons owning bees and not located near streams of water are advised by Massachusetts Ploughman to furnish them fresh water daily, as it will save time, which to the bee means honey and to the person means money.

There continues to be an increase in the breadth of oats fully equal to the advance in population.

A slight reduction in the area of cotton is indicated on the Atlantic coast and an increase west of the state of Alabama. Conditions of the crop are relatively low owing to late frosts; lowest in South Carolina, highest in Texas.